

In The Drawings

Corrected figure 2 is presented for consideration.

REMARKS

The Examiner's reconsideration of the application is urged in view of the amendments above, attachment hereto, and comments which follow.

Taking the matters raised by the Examiner in turn, and first turning to the drawings, figure 2 has been appropriately amended to add the shutter of claim 65. No new matter has been added, as there is adequate disclosure in the application as filed, as in claim 42 and page 17, lines 5-18.

Next, the printing error in claim 81 has been corrected by the revision of claim 81 above. The error is regretted.

Regarding the objection to claims 93-95, 97, 99 and 101-109 as being of improper dependent form, and concerning the rejection of claim 66 under 35 U.S.C. §112 as being indefinite, claims 93, 97 and 101 have been rewritten in independent form. Claim 66, 93, 97 and 101 have been appropriately amended to address the antecedent basis problems as identified by the Examiner. It is believed that all is now in order and in accordance with the provisions of 37 C.F.R. §112.

Beginning in the middle of page 5 of the Office Action, the Examiner commences rejection of the claims under 35 U.S.C. §103, with Volcker U.S. Patent No. 6,686,582 being cited as the primary reference, in combination with the Tiziani article and further in view of Dandliker reissue Patent No. RE. 34,782. Reconsideration is requested.

First, there is no suggestion in the prior art that the teachings of the three references can be combined, and it is submitted that the combination could only be suggested by the subject matter of the present application. That, obviously, is improper.

Furthermore, it does not appear that it would be a routine combination to make, as the Tizani reference concerns the use of confocal microscopy to measure surface topography of a 3D structure, rather than analysis of fluorescence from an array of samples.

In addition, Claim 65 has been amended to incorporate from cancelled Claim 67 the feature that the objective lenses are arranged below the sample array, which is not disclosed or suggested in any of the prior documents relied on by the Examiner. It may be beneficial to image a sample array from below in some circumstances (through a transparent sample plate), for example when there are solid components to be imaged which sink to the bottom of a liquid sample.

Independent Claim 68 has been asserted by the Examiner to describe a filter and aperture mask as taught by Volcker (US 6686582). However, the subject matter of Claim 68 differs from Volcker in that apertured masks are placed on either side of the filter to enhance collimation of the parallel beam to further reduce background and cross-talk. The same comment applies to newly independent Claim 93.

Independent Claim 96 has been challenged on the basis of Volcker and Tizani. It has been amended to further specify provision of a beam splitter, as defined in Claim 98. A similar amendment has been made in newly independent Claim 97.

In Volcker, a beam splitter is provided, but is included further down the optical path, such that excitation energy directed via the beam splitter needs to pass through three more optical elements than in the arrangement claimed in the present Application, before it is incident on the samples. This may distort and/or attenuate the excitation beam to some extent.

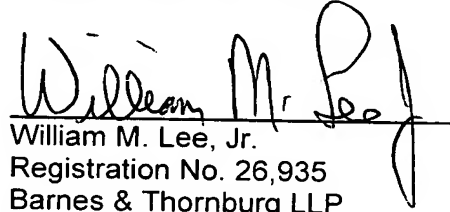
Independent Claim 100 has been rejected as being unpatentable over Volcker and Tizani in combination. However, this Claim specifies that the detector array comprises "an array of photomultipliers, one photomultiplier for each of the optical paths". This feature is neither disclosed nor suggested by the documents relied on by the Examiner. Similar comments apply to newly independent apparatus Claim 101.

Independent Claim 104 is asserted, among other Claims, to be unpatentable over a combination of Volcker, Tizani and Dandliker (US Re. 34782). However, the provision of independently adjustable reading heads as defined in this Claim is not described in any of these references, and the Examiner does not identify any specific disclosure of this feature.

In view of the foregoing, it is submitted that the application, as amended, is in condition for allowance, and the Examiner's further and favorable reconsideration in that regard is urged.

June 1, 2005

Respectfully submitted,

A handwritten signature in black ink, appearing to read "William M. Lee, Jr.", is written over a horizontal line.

William M. Lee, Jr.
Registration No. 26,935
Barnes & Thornburg LLP
P.O. Box 2786
Chicago, Illinois 60690-2786
(312) 214-4800
(312) 759-5646 (fax)